

MIAL STOP PATENT APPLICATION

Attorney Docket No. 25447A

Preliminary Amendment

ATTACHMENT B**Claims:****Claims 1-17 (canceled)**

18. (new) A method for positioning and fixing an orthodontic element on a surface of a tooth, comprising:

- (a) mounting the element on a positioning device having an image acquisition unit mounted thereon such that said element is in the field of view of said unit;
- (b) bringing the element into proximity of the tooth surface while continuously capturing an image of the element and of the tooth;
- (c) transmitting the image or its representation to a display for displaying a real-life image of the captured image or representation together with indicators providing guidance information on intended position of the orthodontic element on the tooth's surface, said indicators consisting of a target sign marking the point of proper position of the orthodontic element superimposed on the real-life image;
- (d) positioning the element on a tooth's surface according to said indicators such that the element's position coincides with the intended position; and
- (e) fixing the element onto the tooth.

19. (new) A method according to Claim 18, wherein said element is fixed such that it is in a fixed position of the acquired image.

20. (new) A method according to Claim 18, wherein said element is an orthodontic bracket.

21. (new) A method for positioning and fixing an orthodontic element on a surface of a tooth, comprising:

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- (f) mounting the element on a positioning device having an image acquisition unit mounted thereon such that said element is in the field of view of said unit;
- (g) bringing the element into proximity of the tooth surface while continuously monitoring the element by an image acquisition unit which captures an image of the element and its surrounding and transmits this image to a screen;
- (h) displaying on a screen
 - i. said image,
 - ii. guidance information relating to a proper position of the element on said surface, said guidance information consisting of a target sign marking the point of proper position of the orthodontic element superimposed on the real-life image;
- (i) in case of a discrepancy between actual position of said element, being the position of the element viewed on the screen, and said proper position, correcting the actual position to match said proper position; and
- (j) fixing the element onto the tooth.

22. (new) A method according to Claim 21, wherein the element is displayed in the center of the image displayed on the screen.

23. (new) A method for positioning and fixing an orthodontic element on a surface of a tooth, comprising:

- (k) placing the element on the surface of a tooth;
- (l) by the use of a positioning device having an image acquisition unit mounted thereon such that said element is in the field of view of said unit, continuously capturing an image of the element and of the tooth;
- (m) transmitting the image or its representation to a display for displaying a real-life image of the captured image or representation together with indicators providing guidance information on intended position of the

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orthodontic element on the tooth's surface, said indicators consisting of a target sign marking the point of proper position of the orthodontic element superimposed on the real-life image;

(n) positioning the element on a tooth's surface according to said indicators such that the element's position coincides with the intended position; and

(o) fixing the element onto the tooth.

24. (new) A method according to Claim 23, wherein said element is fixed such that it is in a fixed position of the acquired image.

25. (new) A method according to Claim 23, wherein said element is an orthodontic bracket.

26. (new) A method for positioning and fixing an orthodontic element on a surface of a tooth, comprising:

(p) placing the element on the surface of the tooth;

(q) by the use of a positioning device having an image acquisition unit mounted thereon such that said element is in the field of view of said unit, continuously monitoring the element by an image acquisition unit which captures an image of the element and its surrounding and transmits this image to a screen;

(r) displaying on a screen

i. said image,

ii. guidance information relating to a proper position of the element on said surface, said guidance information consisting of a target sign marking the point of proper position of the orthodontic element superimposed on the real-life image;

(s) in case of a discrepancy between actual position of said element, being the position of the element viewed on the screen, and said proper position, correcting the actual position to match said proper position; and

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(t) fixing the element onto the tooth.

27. (new) A method according to Claim 26, wherein the element is displayed in the center of the image displayed on the screen

28. (new) A method according to Claim 27 wherein said step (d) further comprising, in case of a match between actual position of said element, being the position of the element viewed on the screen, and said proper position, indicating that the proper position is achieved.

29. (new) A method for orthodontic treatment, comprising:

- determining through a processor means a proper position of an orthodontic element on a surface of a tooth; and
- capturing an image of the element through an image acquisition unit and displaying an image or representation of the element on a display together with guidance information on proper position of the element on the tooth and positioning said element on the tooth with the aid of said guidance information.

30. (new) A system for positioning of an orthodontic element or a marking device having a marking member for marking a position for subsequent placement of an orthodontic element on a surface of a tooth, comprising: an image acquisition unit for capturing an image of the tooth or of said element, and an image of both once the tooth and said element are proximal to one another; an image grabber coupled to said image acquisition unit for receiving the image captured by the image acquisition unit and transmitting an image or a representation thereof to a display unit; and a display unit, coupled to the image grabber, for displaying said image or representation.

31. (new) A system according to Claim 30 comprising a module coupled to the display unit, for displaying markings providing guidance information on the tooth's surface, superimposed on said image or representation.

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32. (new) A system according to Claim 31, wherein said markings constitute of a virtual image of either at least one tooth, the orthodontic element or both.

33. (new) A system according to Claim 32, wherein said virtual image comprises a boundary's representation.

34. (new) A positioning device for positioning an element on the surface of a tooth, comprising: a gripping member for holding the element and releasing it once it is fixed on the tooth surface; and an image acquisition unit for capturing an image of the element held on the gripping member and of its surrounding.

35. (new) A device according to Claim 34, wherein the element and the image acquisition unit are mutually fixed such that said element appears in a predetermined spot of the image captured by the image acquisition unit.

36. (new) A marking device for marking a position for subsequent placement of an orthodontic element on a surface of a tooth, comprising: a marking member held on said marking device in a manner allowing to mark said position on a tooth surface; and an image acquisition unit for capturing an image of the marking device and of its surrounding.

37. (new) A device according to Claim 36, wherein the marking member and the image acquisition unit are mutually fixed such that said member appears in a predetermined spot of the image captured by the image acquisition unit.